(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 26 May 2005 (26.05.2005)

PCT

(10) International Publication Number WO 2005/047218 A1

- (51) International Patent Classification7: C07C 2/40, 5/05
- (21) International Application Number:

PCT/EP2004/011461

- (22) International Filing Date: 11 October 2004 (11.10.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

- (30) Priority Data: MI2003A002084 27 October 2003 (27.10.2003)
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AB, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH. PL. PT. RO. RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KB, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FL, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NB, SN, TD, TG).

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(76) Title: PROCESS FOR PRODUCING 1-OCTENE FROM BUTADIENE IN THE PRESENCE OF TITANIUM CATALYSTS (S7) Abstract: A method is described for the preparation of 1-octene starting from butadiene, wherein in a first step (a) the bls-hydrodimerization of butadiene to 1,7-octadiene is effected in the presence of a catalyst based on palladium containing one or more uncertainty of the preparation of 1,7-octadiene is effected in the presence of a catalyst based on palladium containing one or more metal alkyls of group 13 (selected tri-substituted monodentate phosphines, in an aprotic polar solvent, in a second step (b) the partial catalytic hydrogenation of 1,7octadiene to 1-octene is effected in the presence of a titanium compound activated with one or more metal alkyls of group 13 (selected from boron, aluminum, gallium, indium).